

Granzyme B Catalog # PVGS1418

Product Information

Primary Accession Species	P04187 Mouse
Sequence	Ile21-Ser247
Purity	> 98% as analyzed by SDS-PAGE
Endotoxin Level Expression System	СНО
Formulation Reconstitution	Lyophilized after extensive dialysis against PBS. It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 \Box /ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	14939
Other Names	Granzyme B(G, H), 3.4.21.79, CTLA-1, Cytotoxic cell protease 1, CCP1, Fragmentin-2, Gzmb, Ctla-1, Ctla1
Target Background	Granzyme B is a serine protease most commonly found in the granules of cytotoxic lymphocytes (CTLs), natural killer cells (NK cells) and cytotoxic T cells. It is secreted by these cells along with the pore forming protein perforin to mediate apoptosis in target cells.Granzyme B has also recently been found to be produced by a wide range of non-cytotoxic cells ranging from basophils and mast cells to smooth muscle cells. The secondary functions of granzyme B are also numerous. Granzyme B has been shown to be involved in inducing inflammation by stimulating cytokine release and is also involved in extracellular matrix remodeling.

Protein Information

Name

Synonyms	Ctla-1, Ctla1
Function	Abundant protease in the cytosolic granules of cytotoxic T- cells and NK-cells which activates caspase-independent pyroptosis when delivered into the target cell through the immunological synapse (PubMed: <u>35705808</u>). It cleaves after Asp (PubMed: <u>35705808</u>). Once delivered into the target cell, acts by catalyzing cleavage of gasdermin-E (GSDME), releasing the pore-forming moiety of GSDME, thereby triggering pyroptosis and target cell death (By similarity). Seems to be linked to an activation cascade of caspases (aspartate-specific cysteine proteases) responsible for apoptosis execution (By similarity). Cleaves caspase-3 and -9 (CASP3 and CASP9, respectively) to give rise to active enzymes mediating apoptosis (PubMed: <u>35705808</u>). Cleaves and activates CASP7 in response to bacterial infection, promoting plasma membrane repair (PubMed: <u>35705808</u>).
Cellular Location	Secreted {ECO:0000250 UniProtKB:P10144}. Cytolytic granule {ECO:0000250 UniProtKB:P10144}. Note=Delivered into the target cell by perforin. {ECO:0000250 UniProtKB:P10144}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.